

# Chemistry Managers Coping with Environmentalists' Criticism

Review of:

**Hartwig Heine, Rüdiger Mautz, Wolf Rosenbaum, *Öffnung der Wagenburg? Antworten von Chemiemanagern auf ökologische Kritik*, Ed. Sigma, Berlin, 1995, 334 pp. (ISBN: 3-89404-395-4)**

by Joachim Schummer

Among the sciences, chemistry plays an eminent role in that it has its own traditional industry. The chemical industry is not only the main employer for graduated chemists. Since the public is more aware of industrial chemistry than of academic chemistry, the industry also represents the public image of the whole profession - and that is terribly bad due to environmental concerns.

The study of Heine et al. carefully investigates the way chemistry managers see themselves in response to public ecological criticism. It intends to find out barriers in the ecological dialogue and to estimate the industry's potential for better future communication. Eighty managers (mostly chemists and engineers and some economics, all of middle or low managerial position, aged between 30 and 55) of two major German chemistry companies have been interviewed about: their own role of protecting the environment, their evaluation of effect, form and content of environmentalists' criticism, the political responsibility of environmental concerns, etc. Unfortunately (but meaningfully?), the companies' boards did not allow the authors to carry out a representative survey among their managers, so that all quantitative results may either be questioned or related to the boards' own perspective.

What makes this piece of sociological work interesting from the philosophical view point? It is an important case study of ethics of science, because it analyses the social role of scientific rationality. To come to the most important and surprising result first, the claim for exclusive rationality - in epistemic and moral respect - seems to be the main barrier of the dialogue with environmentalists, much worse than the company's economical interests (pp. 304).

Unlike a widespread prejudice, most of the chemistry managers feel strongly engaged in environment protection, something that covers a great part of their daily work (chapt. I). But most managers strongly reject the form and content of environmentalists' criticism because of irrationality, emotion-charge, lack of knowlege, anti-capitalistic ideology etc. In response to environmentalists' criticism they claim to be the true environmentalists. On the other hand, a great majority nevertheless consider environmentalists to be influential and even positive in drawing the society's attention to central and otherwise neglected problems. Heine et al. put their finger on this conundrum by analysing strategies to solve the paradox (chapt. III): While the effect of environmentalists' criticism is generally considered to be helpful in many cases, form and content of criticism is rejected, on the other hand.

The authors figure out a spectrum of four strategies (chapt. IV). At the one extreme they find "absolutists of scientific-industrial reason" (This extreme is exemplified by M. Eilingsfeld, *Der sanfte Wahn - Ökologismus total*, Mannheim 1989; the system-theoretical patron is N. Luhmann, *Ökologische Kommunikation*, Opladen 1986). The position avoids the paradox by neglecting any influence of environmentalists at all. Environment protection is, according to this minority, a purely industrial enterprise that follows an inherent logic of scientific and industrial reason. At the other extreme, there is a minority (mostly economics), who do not maintain any difference in rationality. From the economic view point they consider environmental protection to be rather the outcome of an increased public demand. The vast majority of chemistry managers, however, are located between these extremes. They claim a scientific-industrial rationality that is qualified to some extend by the environmentalists' criticism. Those who maintain the priority of scientific-industrial rationality explain the positive influence of criticism due to few scientific experts among the environmentalists. But there is also a minority that seem to appreciate a pluralism of rationality in society. According to them improvement of environmental protection needs a balance of pure scientific rationality, on one hand, and everyday's rationality including even emotionality, on the other hand.

No wonder that these different groups had different experience when communicating with the public. Communication barriers increase with the claim for priority of one's own rationality (chapt. V.1). And as one might have expected, along the same line there is an increasing preference for expertocracy with regard to environmental and industrial policy (chapt. V.3). The absolutists of industrial-scientific rationality even reject any political control from outside as irrational and misleading.

Philosophers will miss a more clearcut definition of 'rationality' in this book; the term is only loosely related to "enlightenment, method, practice and progress" (p. 280). Instead the authors provide three features that chemistry managers themselves consider to be characteristic of their own rationality (pp. 284 ff.): (1) knowledge based on scientific method, free of emotions and prejudices, (2) practice (esp. of environment protection) in correspondence to scientific knowledge, (3) social responsibility (esp. in environmental concerns). It is pointed out that these features (incl. moral authority) are rooted back to early professional ethics of scientists and engineers (p. 288). Hence, the main barrier of ecological dialogue between chemists and the public is the exclusive claim for rationality as part of the professional ethics of chemists.

One might seriously question the special moral authority of chemists, since today's chemistry education even strictly excludes any ethical topic. But the point is more fundamental: While philosophical discourse on modernity and rationality has revised the early ideas of scientific enlightenment long ago, they are still alive in real life. Here, at the frontier, the discourse has hardly begun. On the other hand, this book may serve as a starting point because of its careful and unbiased approach (and the avoidance of sociologists' Chinese). I would appreciate to read also an analogous study of the other side: the rationality of environmentalists.